AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A multi-carrier communication apparatus for transmitting data using a plurality of sub-carriers, comprising:

a modulator that modulates a plurality of sub-carriers arranged in a two-dimensional matrix in a complex plane according to first data, the matrix including a plurality of sub-carriers arranged in a direction of a frequency axis and a plurality of sub-carriers in a direction of a time axis;

a determining unit which determines a pattern of particular signals associated with ~~first~~ second data;

an allocating unit which allocates the determined pattern of particular signals to sub-carriers of [[a]] the matrix other than the subcarriers modulated according to the first data~~, the matrix is formed by arranging a plurality of sub-carriers arranged in a direction of a frequency axis in a direction of a time axis~~;

~~an allocating unit which allocates sub-carriers modulated by the second data to a part of the matrix other than the particular signals;~~ and

a transmitting unit which transmits the particular signals allocated to the matrix and the sub-carriers modulated by the ~~second~~ first data.

Claim 2 (Currently amended): A multi-carrier communication apparatus, comprising:

a detecting unit which detects a pattern of particular signals associated with first data which are allocated to sub-carriers of a two-dimensional matrix formed by arranging a plurality of sub-carriers ~~arranged~~ in a direction of a frequency axis and a plurality of sub-carriers arranged in a direction of a time axis obtained from received data in a direction of a time axis;

a restoring unit which restores the first data associated with the detected pattern; and

a demodulating unit which demodulates second data from sub-carriers which are modulated by the second data allocated to a part of the matrix other than the particular signals.

Claim 3 (Original): The multi-carrier communication apparatus as set forth in claim 1 or 2, wherein each of the plurality of sub-carriers arranged in the direction of the frequency axis has an orthogonal relationship with a sub-carrier adjacent thereto.

Please add the following new claims to the present application:

Claim 4 (New): The multi-carrier communication apparatus as set forth in claim 1, wherein at least one of a number of sub-carriers arranged in the direction of the frequency axis and a number of sub-carriers arranged in the direction of the time axis is variable.